

ARM Manus Research Station

Site Visit 0505M Report

Visit Duration: 16 May to 27 May 2005

Manus Island, Papua New Guinea

SV-0505M

Site:	Proposed Dates on Site: 16 - 27 May 2005
Team Members: Troy Culgan Chris Bull Kevin Widener Krzysztof Krzton (20 - 27 May)	Ship or hand carry prior to SV: HOGEN, TSI 660 (#102)
	Safety: Major Hazards: Caustic chemicals (KOH), Explosive gas (H2), AC electricity Hazard Controls: BOM Electrolyser Handbook, BM Electrolyser Operations/Maintenance Training, ASNZS 4836/2001-Safe Working on LV Electrical Installations, 2-man rule
	Reminder: When replacing items (e.g., desiccant, filters, etc.), record and report the quantity of spares left on site.

Site Tasks

Priority	System	Date Completed (dd/Month)	Service Time in Hours	Tasks/Assoc Hazards-Controls For each priority item insert new line (row) for each date/time entry
1	HOGEN			Install and commission HOGEN; Train on use
		15-May	1	Checked with Dick Pearse about Hogen delivery, will have more information 16 May. Reviewed site work requirements for install.
		16-May	0.5	Dick Pearse informed me that we will attempt to move the Hogen container on Wednesday.
		18-May	0.5	Dick Pearse informed me that the truck has a broken clutch. We will open container and customs/quarantine clearance on Thursday and transport contents to the site, this will reduce the weight of the container allowing alternative transport.
		19-May	3	Customs and quarantine clearance completed: Contents of Hogen container delivered to site excluding Hogen and water treatment plant.
		22-May	4	Prepared electrical and Gas trenching
		24-May	3	Liaised with Dick Pearse and local people (Works Dept and Ronnie Knight) to attempt container delivery 25 May.
		25-May	8	Hogen container delivered to site, power connected and water treatment plant set to work.
		26-May	8	Gas storage tanks purged, Gas lines checked for leaks. Attempt to start Hogen, startup fail due to rectifier #1 fault. Rectifier replaced Hogen started, after a short period of operation fault indication E-11 was displayed indicating a low pressure condition. Hogen shutdown at this time awaiting further site visit to rectify faults and commission
1.5	H2Gen			Perform Electrolyser and RBL maintenance
		22-May	6	Electrolyser routine maintenance commenced.

		23-May	3	Electrolyser maintenance complete.
2	TSI			Install and commission TSI 660 (#102)
		15-May	2	Began preparations for TSI install
		16-May	2	Reinstalled power to TSI stand so that there is UPS and Non UPS Power (Non UPS power for dome heater). TSI PC installed.
		17-May	4	TSI installed, advised mentor to check
		19-May	1	Removed U10 from TT8 board as per mentor's instructions.
		23-May	1	Installation complete.
3	MPL			Make adjustments
		16-May	0.5	Radmin installed to facilitate adjustments.
		19-May	1	Adjusted laser current from 1.23 to 1.32 as per Albert Mendoza's instructions.
4	MPL			Verify serial number for controller
		16-May	0.5	Scalar Controller Model 1002. Serial number: 022. WD27984. (Remote Hand controller Model 7310, serial number: 6145).
5	MPL			Verify serial number for optical transceiver
		16-May	0.5	Optical transceiver MPL1001-009. Serial number: 009a.
6	MPL			Verify serial number for laser diode
		16-May	0.5	Laser Diode 7300. Serial number: U3332. WD27540
7	MPL			Verify serial number for computer
		16-May	0.5	IBM 600: 128meg RAM, Windows 98SE. Serial number: 78-GNG52. LANL number: 1101345
8	MMCR			Repair
		15-May	4	Kevin Widener began checks on MMCR and found the CUDC was off. Radar appears to be collecting useful data but still requires calibration checks and overseeing if intermittent fault returns.
		16-May	8	Performed calibration checks.
		17-May	8	Continued to monitor and perform system checks.
		18-May	8	Continued to monitor, CUDC power switch checked and part number obtained for possible future replacement of switch. Calibrated RF attenuator.
		19-May	6	Antenna inspected and level check, calibration completed. MMCR operational.
9	MMCR			Change out antenna heater filters
		17-May	0.5	Filter changed out.
				14 spares left on site.
10	MMCR			Change out TWTA desiccant
		17-May	0.5	Desiccant changed.
				6 spares left on site.
11	MMCR			Verify serial number for ADC488/16A
		17-May	0.5	Serial number: 096013 (Mux488/64 serial number: 095391)
12	BBSS			Review/test revised Launch Procedure
		24-May	2	Reviewed revised launch procedure, report to be submitted.
		27-May		Report submitted.
13	BBSS			Troubleshoot Nauru Launch Procedure w/ RS80 sondes
		18-May	1	Launched RS80 sonde at Manus, no apparent problem with launch procedures used at Nauru.

		20-May	1	Worked with Franklin at Nauru to modify the Digicora Sysgen, changing the IF bandwidth from narrow to wide. This appears to have rectified the problem of not being able to launch RS90 analog sondes.
14	WSI			Decommission, disassemble, and pack for shipment
		20-May	4	Decommissioned WSI, removed cabling, removed camera, removed white box from stand.
		22-May	2	Removed Blue box from I-Van.
		24-May	1	Spare parts gathered and set aside for shipment.
		26-May	1	Hymson will liase with contractor to prepare for shipping.
15	IRT			Change out Gold Mirror on SKYRAD IRT
		17-May	0.5	Mirror changed at 14:27 local time.
				3 spares left on site.
16	MPL			Change out shutter timer batteries
		18-May	0.2	Batteries replaced.
17	SMET			Change out T/RH aspirator fan
		17-May	0.5	Aspirator fan changed at 14:22 local time.
				No spares left on site.
18	SMET			Verify Barometer (PT201A) serial number
		17-May	0.5	Verified serial number: P0830004
19	PSP			Verify GNDRAD PSP serial number
		17-May	0.2	29915F3 RS@45=7.9418
20	PSP			Verify SKYRAD PSPG serial number
		17-May	0.2	29913F3 RS@45=7.8047
21	PSP			Verify SKYRAD PSPD serial number
		17-May	0.2	33271 RS@45=9.0870
22	PIR			Verify GNDRAD PIR serial number
		17-May	0.2	31304F3 K0= -10.28 K1=0.28169 K2= 1.018 K3=-2.797
23	PIR			Verify SKYRAD PIRD1 serial number
		17-May	0.2	31301F3 K0= -0.75 K1= 0.31270 K2= 0.999 K3= - 3.520
24	PIR			Verify SKYRAD PIRD2 serial number
		17-May	0.2	31302F3 K0= - 5.41 K1= 0.27536 K2= 1.007 K3= - 2.405
25	SAM			Verify serial number for GOES laptop (IBM ThinkPad 600)
		17-May	0.5	IBM 600 with Win98SE. 96Meg RAM. Serial number: HPX03.
26	SMET			Verify T/RH sensor (HMP45D) serial number
		17-May	0.5	Serial number: W0120007
				3 T/RH probe left on site (s/n W46300002, W0120005, Z4830010), and they could be used for AWS id necessary.
27	Other			Maintenance Checklist
		18-May	4	Commenced maintenance check list.
		20-May	3	Continued maintenance check list.
		21-May	6	Completed.
28	COMM			Computer inventory
		18-May	2	Computer inventory completed and emailed to TWP management.
29	COMM			Disassemble GOES antenna and associated components, and then store on site
		16-May	1	GOES equipment shutdown and antenna cable removed from I-Van.

		18-May	1	Goes equipment removed and stored in Y-Van.
30	Other			Change out gas analyzer internal battery
		24-May	1	Batteries on site dated Nov 22 2002, may be beyond shelf life.
31	GENSET			Routine maintenance
		21-May	1	Completed.
32	HVAC			Service by AE Smith
		16-May	3	AE Smith tech arrived and commenced service.
		17-May	8	#1 outdoor unit changed out E-Van, AC service completed.
33	MFRSR			Assess/inspect head and board
		18-May	1	Inspected head and board, there are no signs of corrosion or damage.
34	SAT Phone			Change out SAT Phone batteries
		24-May	1	Nil batteries onsite.
35	SHIPPING			List items to be shipped following visit
				WSI to SGP
36	FUTURE NEEDS			List items needed for future visits (spares, etc.)
				Replacement battery for Metconsole laptop (IBM-02K7054)
				Silastic
				Safety gloves
				BBSS PA11A batteries
				Hacksaw frame and blades
				Vice grips
37	AWS			Calibration check and replace RH probe
		17-May	4	Calibration check complete, RH probe replaced.
				No spares left on site (brought to site as required).
		19-May	1	Installed original AWS metconsole due to data base corruption on current metconsole.
38	AWIB			Upgrade to version 3.2
		21-May		Upgrade to Version 3.2 as per BOM engineering bulletin.